

BRANCH AMPLIFIER CARD

ABSTRACT OF THE DISCLOSURE

[0044] A branch amplifier card for a nuclear reactor control rod drive control system is provided. The control system includes a control processor, a plurality of transponder cards arranged in clusters with each cluster under the control of a branch amplifier card. The branch amplifier card is configured to receive commands from the control processor, send the converted commands to transponder cards under the control of the branch amplifier card and to a downstream branch amplifier card, receive an acknowledge word from transponder cards under the control of the branch amplifier card, add AC voltage threshold level information about the transponder cards under the control of the branch amplifier card to the acknowledge word, permit transponder trouble information attached to the acknowledge word to remain in the acknowledge word, and resend the acknowledge word including the transponder trouble information to an upstream branch amplifier card.